Restricted Circulation

This paper is not an official document; it is for information only and reference cannot be made to it in any printed publication with the permission of the author.

AGRICULTURAL MEMORANDUM NO 424

RETURN TO CAPACITY DATES AND AUTUMN CEREAL SOWING

L P Smith

Mr J H Davis, ADAS District Agricultural Adviser at Leamington Spa, has provided figures for the percentage of winter wheat (with reference to the total cereal and fallow acreage) in the Southam area of Warwickshire, 1959-1970 (shown the previous autumn), and in the Kidderminster area of Worcestershire, 1965-1970.

In the Southam area the soil is described as "heavy over the majority of the district: mostly Lower Lias clay, a little boulder clay and some Middle Lias marlstone soils (normally permanent pasture)". Around Kidderminster "the area is predominately of a light soil type".

Return to capacity dates, following the methods outlined in MAFF Tech Bull 24 were estimated using monthly rainfall totals from official stations at Banbury Road, Southam and Park Hall, Kidderminster.

Results

Southam			Kidderminster		
Year	Return Date	Percentage winter wheat	Year	Return Date	Percentage winter wheat
1968- 9	early-Sept	34	1965- 6	late Sept	23
1958- 9	early-Oct	43	1967- 8	late Oct	31
1960- 1	early-Oct	41	1968- 9	late Oct	27
1966- 7	late-Oct	49	1966- 7	early Nov	28
1965- 6	early-Nov	49	1969-70	early Dec	30
1967- 8	early-Nov	48	1964-65	late Dec	36
1963- 4	mid-Nov	51			
1969-70	late-Nov	46			
1959-60	mid-Dec	53			
1961- 2	mid-Dec	50			
1962- 3	late-Dec	51			
1964- 5	mid-Jan	60			

The correlations between return date and winter wheat percentage are 0.93 and 0.88. It is interesting to note that in the Southam area, the percentages in the two years following the "difficult" autumn of 1960 were less than might have been expected, and the same influence is to be seen in 1969 following the poor conditions of autumn 1968. On the other hand, after the "easy" autumn of 1964, the following three years show higher percentages than might be implied from weather data.

These figures underline the dominating effect of autumn rainfall on the autumn sowing of cereals. It is also significant that the effect is just as

striking on the sandy soils of Kidderminster as on the heavier soils of Southam, thus suggesting that the influence of soil type is less than might have been expected.

Any comments or criticism on this paper should be referred to the author.

February 1972

Meteorological Office
Bracknell

15166/VT/2/72/60